

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

To:

see form PCT/ISA/220

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/EP2004/011979

International filing date (day/month/year)  
22.10.2004

Priority date (day/month/year)  
24.10.2003

International Patent Classification (IPC) or both national classification and IPC  
H01B3/44

Applicant  
BOREALIS TECHNOLOGY OY

**1. This opinion contains indications relating to the following items:**

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/EP2004/011979

**Box No. I Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material:
    - ☐ in written format
    - ☐ in computer readable form
  - c. time of filing/furnishing:
    - ☐ contained in the international application as filed.
    - ☐ filed together with the international application in computer readable form.
    - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/EP2004/011979

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	1-7
	No: Claims	8-10
Inventive step (IS)	Yes: Claims	
	No: Claims	1-10
Industrial applicability (IA)	Yes: Claims	1-10
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

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**Box No. VIII Certain observations on the international application**

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The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

PCT/EP2004/011979

**Re Item V.**

1 The following document is referred to in this communication:

D1 : EP 1 235 232 A (PIRELLI CAVI E SISTEMI SPA) 28 August 2002 (2002-08-28)

**2 Novelty**

a) Document D1 discloses a polymeric composition for insulating a low voltage conductor (see D1 col 11 lines 1-17) which comprises a copolymer of ethylene and a polar monomer (see D1 col 3 lines 38-42). In a preferred embodiment, the polar monomer is butyl acrylate (see D1 col 4 lines 27-32); a composition including a 10% by weight butyl acrylate content is specifically disclosed (equivalent to approx. 2.4 mol%). Although D1 does not disclose the density of this polymer, it would be expected to have a density of less than 1100 kg/m<sup>3</sup> as claimed in the application. D1 goes on to disclose the addition of alkoxysilanes, e.g. VTMS, to the composition (see D1 col 5 lines 16-59 and examples) as well as extrusion of this composition (see D1 col 13 lines 14-54) onto a wire for which no specific heating above ambient temperature is mentioned.

In light of this disclosure, the subject-matter of claims 8-10 cannot be considered as novel within the meaning of Article 33(2) PCT.

**3 Inventive step**

The difference between the subject-matter of claim 1 of the application and that of D1 is the inclusion of 0.0001 to 3 wt.-% of a silanol condensation catalyst in the composition. The effect of this difference is not known, and therefore the objective problem solved by the claimed invention is how to provide an alternative composition for an insulation layer composition to that of D1. While one skilled in the art receives no specific indication to add silanol condensation catalyst to the composition by reading D1 or any other prior art documents, the application on file lacks any indication that such addition has any technical effect (e.g. a surprising effect) on the properties of the insulation layer in comparison with that of D1.

Therefore the subject-matter of claim 1 appears to lack an inventive step within the meaning of Article 33(3) PCT. Furthermore dependent claims 2-7 do not appear to contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step within the meaning of Article 33(3) PCT.

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**Re Item VIII.**

Claim 8 claims a process in which a conductor 'is preheated to a maximum temperature of 65 °C'. However, claim 9, which is dependent on claim 8, claims a process employing a 'non-preheated conductor'. The doubt as to whether the preheating is an essential feature of claim 9 leads to a lack of clarity within the meaning of Article 6 PCT. The use of a phrase such as 'having a maximum temperature of 65 °C' might be preferable for claim 8.